Memorandum - Amended Draft Remedial Investigation Work Plan

July 11, 2006 – 1:30 p.m. Star Lake Canal Conference Call
Summary and Documentation of Discussion

Conference Call Participants

Philip Allen	EPA
Gary Jacobson	CEMC
Lon Tullos	Huntsman
Barry Gillespie	ENTRIX
Tammy Ash	USFWS
Barry Forsythe	USFWS
Keith Tischler	TGLO
Andy Tirpak	TPWD
Sara Schreier	TCEQ
Larry Champagne	TCEQ
Richard Seiler	TCEQ
John Wilder	TCEQ

Objective

The objective of the 1:30 p.m. conference call was to discuss the nine agency comments to the amended draft remedial investigation work plan (RIWP) that were electronically transmitted to Chevron Environmental Management Company (CEMC) by Philip Allen of EPA on July 6, 2006.

On July 11, 2006, prior to the conference call, Gary Jacobson of CEMC electronically transmitted two files to the agencies. One file was a table consisting of the nine agency comments to the amended draft RIWP and CEMC's response to each comment. That table, with one post conference call addition, is attached to this memorandum. The second file contained three maps indicating the additional sampling locations proposed by CEMC in response to agency comments 1a, 1b and 3. Based on his review of the table and maps Philip Allen indicated that there were two issues, comment 4 as one issue and comments 1a-b and 3 as the other, that needed to be discussed by the participants in the conference call.

Discussion

Jessica White of NOAA first addressed comment 4 which was associated with the proposed method of handling COCs with low frequencies of detection. She indicated that she had read CEMC's response to comment 4 and that her concern was now satisfied. Philip Allen asked if all others were in agreement and everyone indicated that CEMC's response to comment 4 was sufficient.

JessicaWhite then addressed the second issue (comments 1a-b and 3) which focused on the need for additional sampling locations to investigate areas where no samples had been proposed. She agreed with the proposed seven additional sampling locations shown on the three maps, but thought that the Molasses Bayou area needed still more sampling

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locations. The specific concern was that Hurricane Rita might have redistributed sediments outside of the main canals and bayou. A random sampling design was discussed as a methodology to add a couple of additional sampling locations, however, it was decided that biased sampling would probably better address this issue. Three additional sampling locations in the Molasses Bayou area were then selected and agreed to by the conference call participants. All of the proposed sampling locations, including the ten added locations, are shown in attached Figures 6-2, 6-3 and 6-4.

Philip Allen then indicated that it was his opinion that all of the agency comments to the amended draft RIWP had been adequately addressed. All attending the call concurred with this statement.

Philip Allen asked if there were any other questions. Sara Schreier of TCEQ asked how the potential groundwater to surface water pathway was being addressed. Gary Jacobson indicated that, as was explained in the amended draft RIWP, this issue is being addressed under the Huntsman facility's existing RCRA program. Under that program an investigation involving geoprobes and monitoring wells in the vicinity of the upper reach of the Star Lake Canal is planned and that plan has been submitted to TCEQ.

Sara Schreier then asked whether TRRP standards are going to be considered in the SLERA. Philip Allen indicated that EPA doesn't consider TRRP standards to be ARARs. Gary Jacobson added that he thought this issue was addressed in the amended draft RIWP but that he wasn't prepared to talk further on this because it was not submitted as an agency comment to the amended draft RIWP.

Philip Allen asked Entrix to prepare a memorandum documenting and summarizing the results of the conference call and stated that the memorandum will be electronically transmitted to the conference call participants by July 17, 2006. He then indicated that the participants would have until July 24, 2006 to respond to him if they have any comments in regards to the memorandum and that if he has not received comments by that time, the amended draft RIWP would then be approved with the revisions as documented in the memorandum. All agreed and Philip closed the meeting.

RESPONSE TO THE REVISED REMEDIAL INVESTIGATION WORK PLAN REVIEW COMMENTS
STAR LAKE CANAL SUPERFUND SITE, JEFFERSON COUNTY, TEXAS
July 12, 2006

Item No.	*Reference*	*Comment made by*	*Comment*	*Response*
GENERAL COMMENTS				
1a	General	Ash & Tischler, US Fish & Wildlife Service	While the revised draft does state that additional sampling will be performed in Tier 2 if the presence of COCs posing ecological risk is found at locations from Tier 1, this does not entirely address our concern regarding adequacy of the Tier 1 sampling. One of our concerns is that certain areas within the "potential area of concern" are not being sampled at all (see our previous comments on Molasses Bayou especially the southeast corner, wetlands adjacent to the canal, and the confluence with Neches River). There are several portions of the site not represented by even a single sample of any media. If an area is never sampled in Tier 1, why would Tier 2 sampling occur in that area if there will be no Tier 1 samples to indicate levels at ecological risk? We feel more samples are needed in this area since the revised draft failed to provide justification or clarification of the current sampling plan. For example, we requested a minimum of 2 samples be added to the Molasses Bayou area to increase coverage. Instead the revised draft shows one sample was moved from one location to another, and none were added.	The sample locations were selected based on a source and path rational as described in the Work Plan. There is no reason to suspect that constituents would be located in the southeast portion of Molasses Bayou because there is no known source and no pathway. Sediment transport and deposition resulting from flood stage sheet flow are not believed to be a major pathway. Meteorological and streamflow data pertinent to the site were compiled and reviewed. The frequency of severe precipitation and flood events is extremely low. As shown on Exhibit 1 of the Revised Work Plan, the water elevations measured at the Rainbow Bridge gaging station are not those that would result in overland flow in Molasses Bayou. During periods of overland flow, constituent concentrations in sediment would be reduced due to the amount of additional sediment input from outside the source area into the sediment budget. Nevertheless, two additional samples will be proposed in Jefferson Canal, two additional samples will be located in Star Lake Canal, and three additional samples will be proposed in the vicinity of Molasses Bayou.
1b	General	Ash & Tischler, US Fish & Wildlife Service	Secondly, we expressed concern that portions of the sampling plan (i.e. sediment and surface water in Jefferson Canal) have too few samples for the distance represented. Again the revised draft fails to provide justification for location and number of samples. Additional surface sediment samples should be added to the proposed Star Lake Canal and Molasses Bayou sample suite to ensure effective geographic coverage. The historical data provided and utilized to develop the proposed sampling locations supports the need for greater spatial coverage given that data's limited coverage and restricted utility (Section 2.1). The proposed sample locations along Star Lake Canal are spaced sufficiently far apart as to miss contaminant hotspots of significant size (i.e., 900 ft.), as are those within the interior of Molasses Bayou. Based upon the historical rationale cited, additional samples should also be provided within Molasses Bayou to address sediment transport and deposition resulting from flood stage sheet flow (Section 6.2.1.3) which may remobilize contaminated sediments into areas (identified as intervening marshland)	See Response to Comment No. 1a
2	General	Ash & Tischler, US Fish & Wildlife Service	The revised document fails to address the criteria previously identified by the Trustees of habitat suitability as the basis for inclusion of threatened and endangered (T & E) species in the evaluation of potential receptor species. Text indicating the observed occurrence of T & E species as criteria for inclusion remains (Section 3.4) in conflict with the Trustee comment. Pending concurrence from Texas Parks and Wildlife and the US Fish and Wildlife Service on the proposed receptor list is insufficient justification to omit T & E species that may occur from the preliminary list. Additionally the Brown Pelican has not been added as a potential receptor as requested in prior Trustee comments.	The T&E that may occur at the site will be added in the receptors of concern (ROC) list, including the Brown Pelican.

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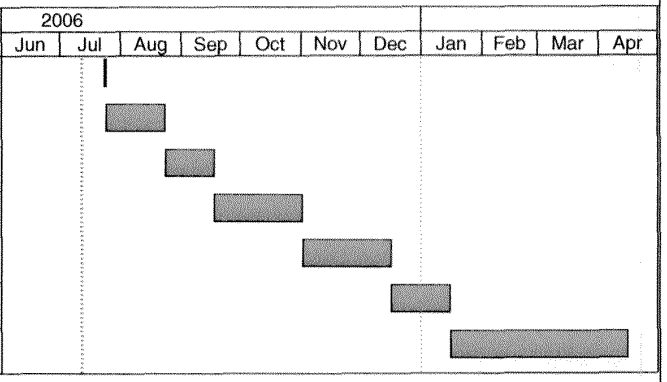
Item No.	*Reference*	*Comment made by*	*Comment*	*Response*
3	General	White, National Oceanic and Atmospheric Administration	While it is understood that additional sampling beyond what is proposed in the current Work Plan is likely, the sampling described in the Work Plan should be expanded to be more comprehensive in scope. The trustees noted in previous comments that some areas were not covered at all, and that it was not clear how the sample size and distribution was decided. One of the concerns is that certain areas within the "potential area of concern" are not being sampled at all (see previous comments on Molasses Bayou especially the southeast corner, wetlands adjacent to the canal, and the confluence with Neches River". There are several portions of the site not represented by even a single sample of any media. If an area is never sampled in Tier 1, why would Tier 2 sampling occur in that area if there will be no Tier 1 samples to indicate levels at ecological risk? To be efficient, the initial sampling effort should utilize the available sample data (from the SSI, ESI) to determine the locations for sampling (based upon past distribution) and number of samples (based upon variability of contaminant concentrations in media).	The sample locations were selected based on a source and path rational as described in the Work Plan. There is no reason to suspect that constituents would be located in the southeast portion of Molasses Bayou because there is no known source and no pathway. Nevertheless, two additional samples will be proposed in Jefferson Canal, two additional samples will be proposed in Star Lake Canal, and three additional samples will be proposed in the vicinity of Molasses Bayou to further expand the sample collection locations. **Based on the July 11, 2006 conference call three additional sampling locations were added to the Molasses Bayou area so that the total sampling locations added to that area will be six.**
SPECIFIC COMMENTS; Section 3				
4	Section 3.3 page 3-3	Ash & Tischler, US Fish & Wildlife Service	Frequency of detection should not be used at the Tier 1/SLERA level to remove contaminants from further assessment in the Tier 2/BERA if they exceeded the ecological screening benchmark. Site-specific adjustments based upon contaminant distribution, frequency, and receptor use of affected habitat may be made during the BERA.	Constituents with low frequencies of detection in the Tier 1 sediment and surface water samples that exceed ecological screening benchmarks will be retained for further assessment in Tier 2. In Tier 2 sediment and surface water samples will be collected in the vicinity of the locations of Tier 1 samples that had constituent(s) detected above the ecological benchmark. The Tier 2 samples in a given area of the site will be analyzed for the constituent(s) that were detected above ecological screening benchmarks in that area of the site during Tier 1.
5	Section 3.4.2 pages 3-10-3-11	Ash & Tischler, US Fish & Wildlife Service	We resubmit the following comments which the revised draft has not addressed: The characterization of the muskrat exposure in the text is incorrect. *Muskrats are primarily aquatic animals, burrowing into the sediments of marshes or river banks or shorelines. They feed primarily on aquatic vegetation. Therefore they will be exposed to contaminants primarily through aquatic vegetation, surface water and sediments, not soil as the report indicated.* Please revise accordingly.	The Work Plan will be revised as requested.
6	Section 3.4.2 page 3-10	Ash & Tischler, US Fish & Wildlife Service	It is unlikely much information will be available to estimate risk to the white-faced ibis, therefore we suggest using a surrogate species. The RI Work Plan should indicate which surrogate species will be used, and should discuss using conservative assumptions (NOAELs) for the selected surrogate.	The Work Plan will be revised as requested.
7	Section 3.6.1 pages 3-12-3-14	Ash & Tischler, US Fish & Wildlife Service	Although the text states that shorebirds will be exposed to bank soils, the conceptual exposure model for the site lists the pathways for shorebirds and waterfowl as incomplete. Please revise. Please revise the food web also showing more utilization of the "wetland" and "bank soil."	The Work Plan conceptual site model will be revised as requested.
8	Section 3.3 pages 3-3	White, National Oceanic and Atmospheric Administration	Frequency of detection should not be used to eliminate contaminants from further assessment in the risk assessment. Contaminants with concentrations exceeding ecological screening benchmarks should be retained for further assessment. Also, consideration should be given to contaminants with low frequency of detection, but present at high concentrations as they may represent hot spots within the area of concern.	See Response to Comment No. 4

FIGURE 7-1
Remedial Investigation Schedule (Revised 7-12-06)
Star Lake Canal Superfund Site
Jefferson County, Texas

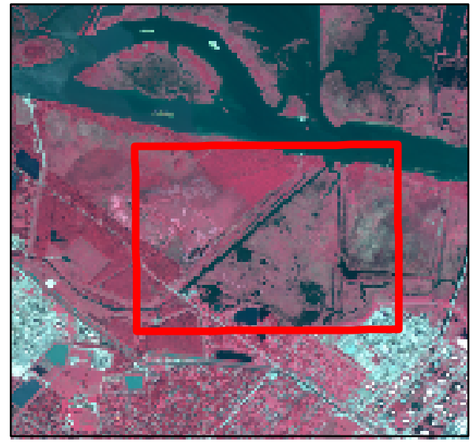
ID	Task Name	Duration	Start	Finish
1	Work Plan approval (assumed)	1 day	Mon 7/24/06	Mon 7/24/06
2	Prepare to mobilize to site	30 days	Tue 7/25/06	Wed 8/23/06
3	Mobilize to site	25 days	Thu 8/24/06	Sun 9/17/06
4	Conduct fieldwork	45 days	Mon 9/18/06	Wed 11/1/06
5	Sample analysis	45 days	Thu 11/2/06	Sat 12/16/06
6	Analytical data validation	30 days	Sun 12/17/06	Mon 1/15/07
7	Report preparation	90 days	Tue 1/16/07	Sun 4/15/07



Project: 27545-00
Date: Wed 7/12/06

Task

Note: The mobilization time in Task 3 was decreased by 5 days from the previous schedule submitted on 6-8-06.



0 400 800 1,600
Feet

Legend

- Site Boundary
- Surface Water Sample
- Surface, Mid and Refusal Depth Sediment Sample
- Surface Sediment Sample

Digital ortho-quadrangle (DOQ) obtained from Texas Natural Resources Information System. Port Arthur North quadrangle - 2004.

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FIGURE 6-4 (REVISED)

Proposed Sample Locations
Gulf States Utility Canal and
Molasses Bayou
Star Lake Canal Superfund Site
Jefferson County, Texas

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Star Lake Canal

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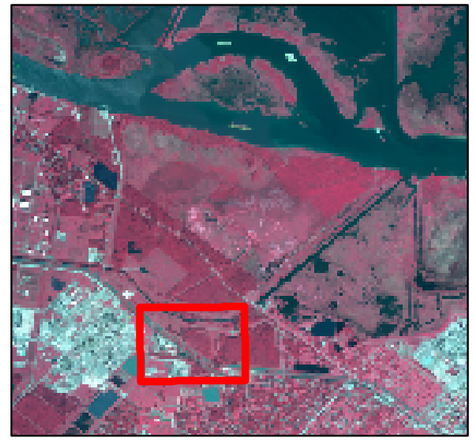
Jefferson Canal

Jefferson Canal



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Feet

Legend

- Site Boundary
- Star Lake Canal Dam
- Surface Water Sample
- Bank Soil Sample
- Surface, Mid and Refusal Depth Sediment Sample
- Approximate Location of Jefferson Canal
- Approximate Location of Dredge Materials Along West Bank of Jefferson Canal

Digital ortho-quadrangle (DOQ) obtained from Texas Natural Resources Information System. Port Arthur North quadrangle - 2004.

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FIGURE 6-2 (REVISED)

Proposed Sample Locations
Jefferson Canal
Star Lake Canal Superfund Site
Jefferson County, Texas

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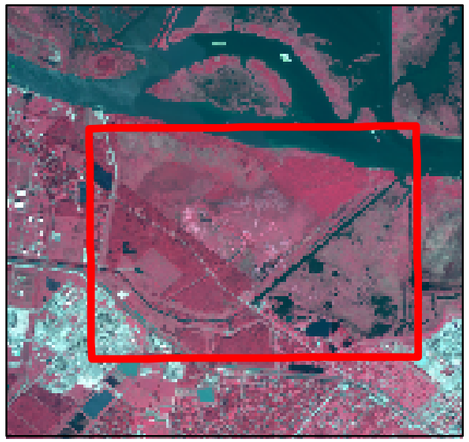

0 500 1,000 2,000 Feet

Legend

- Site Boundary
- Star Lake Canal Dam
- Surface Water Sample
- Surface, Mid and Refusal Depth Sediment Sample

Digital ortho-quadrangle (DOQ) obtained from Texas Natural Resources Information System. Port Arthur North quadrangle - 2004.

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FIGURE 6-3 (REVISED)

Proposed Sample Locations
Star Lake Canal
Star Lake Canal Superfund Site
Jefferson County, Texas

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